START HERE - QUICK GUIDE FOR STUDENTS

This folder contains everything you need for the Tableau Dashboard Generator project. Here's what to read and in what order:

READ THE PROJECT SPECIFICATION
File: TABLEAU_DASHBOARD_GENERATOR_PROJECT.txt (15 min read, 367 lines)

This is THE document. It has everything you need:
- Project description and learning goals
- Week 1-2: What to understand and design
- Week 3-8: What to build (8 components)
- Success criteria and grading rubric
- Architecture guidance
- Technical stack required
- Build strategy/timeline
- How to get help

AFTER READING: You should understand:
□ What you're building (an AI-powered dashboard generator)
□ Why (automates tedious dashboard creation)
□ What components you need (8 major pieces)
□ How they fit together (architecture)
□ What makes it successful (criteria)

COMPONENTS TO BUILD (8 total)
1. Data Processing Pipeline
2. AI Analysis Engine (with Azure OpenAI)
3. Visualization Recommendation Engine
4. Tableau Workbook Generator (XML)
5. Workflow Orchestration (Langgraph)
6. Web User Interface (Streamlit)
7. Logging & Monitoring
8. Comprehensive Testing

TIMELINE
Week 1-2: Design & learning
Week 3-8: Build core components
Each component is independently testable

SUCCESS CRITERIA
- Functional system that generates Tableau workbooks □
- Clean, well-tested code □
- Comprehensive documentation □
- >80% test coverage □

MOST IMPORTANT ADVICE

1. START WITH ARCHITECTURE
   Don't code yet. Draw diagrams. Plan interfaces. Design Pydantic schemas.
   This is where you prevent problems later.

2. BUILD BOTTOM-UP
   Data → AI → Recommendations → Generation → UI
   Each layer works independently. Test each before moving up.

3. LEARN TECHNOLOGIES FIRST
   Pydantic, Streamlit, Langgraph, Azure OpenAI
   Don't try to learn and build simultaneously.

5. WRITE TESTS AS YOU GO
   Not after. Each component should have unit tests immediately.
   Makes debugging much easier later.
